

A NEW SPECIES OF *BOCHARTIA* OUDEMANS FROM TEXAS
(ACARI: ERYTHRAEIDAE: ERYTHRAEINAE)¹

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Abstract.—A new species, *Bochartia shirleyanneae* (Erythraeidae: Erythraeinae), was collected from southern Texas. This extends the distribution of the genus *Bochartia* Oudemans to include the United States.

Southcott (1961), in his studies on the systematics and biology of the Erythraeoidea, pointed out the relationship between Nearctic and Palaearctic Erythraeinae. Little comparison was possible at that time as no larval Erythraeinae had been described from either North or South America.

In a study of the microarthropod fauna of the Rob and Bessie Welder Wildlife Foundation in southern Texas, a single larval specimen representing the subfamily Erythraeinae was collected. This larva belongs to the genus *Bochartia* Oudemans following Southcott's (1961) definition of this genus.

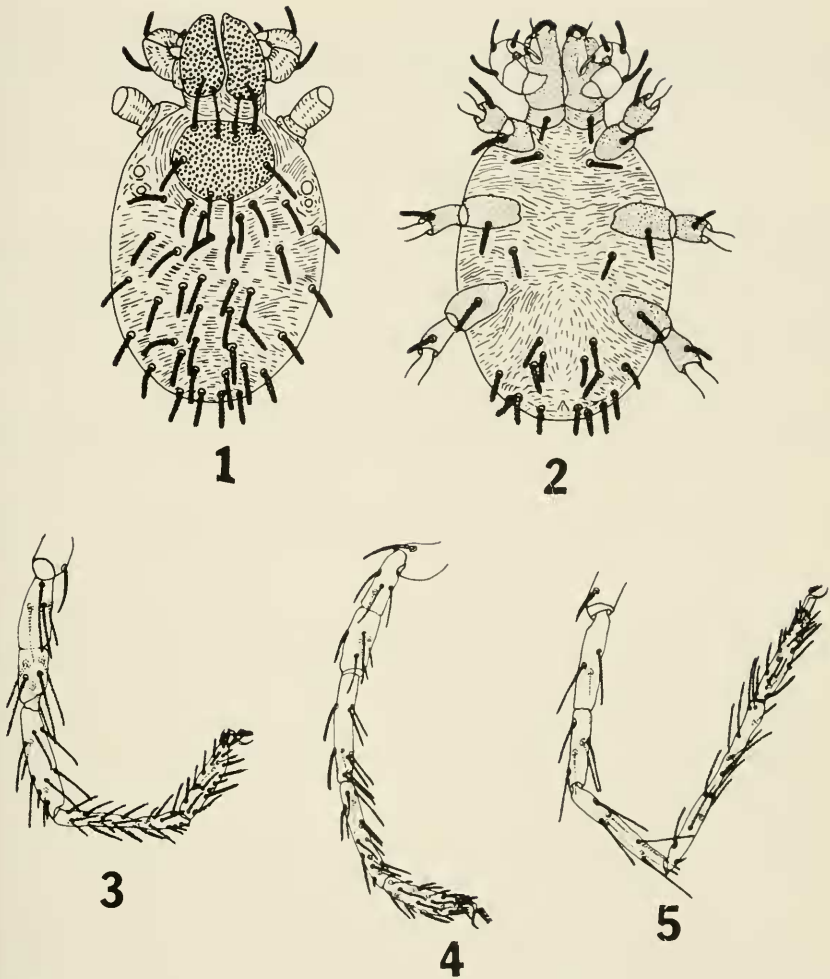
Bochartia was established by Oudemans (1910) for *B. kuyperi* Oudemans. Southcott (1961) utilized the following structures to separate *Bochartia* from *Forania* Southcott (1961) which contains the species *Forania mentonensis* (André): The presence of three pairs of scutalae in *Forania* against two in *Bochartia* and the coxal formula of 1, 3, 3 for *Forania* against 1, 1, 1 for *Bochartia*.

The larval specimen collected from southern Texas represents a new species and extends the distribution of the genus *Bochartia* to include the United States; to our knowledge the first record of an Erythraeinae larva from North America.

Bochartia shirleyanneae McDaniel and Bolen, NEW SPECIES
Figs. 1-5

Description.—Idiosoma globular, length to tip of mouthparts 420 μ , length of idiosoma 295 μ , width 225 μ (measured between legs 2 and 3). Dorsal

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Figs. 1-5. *Bochartia shirleyanneae*, holotype larva. 1, Dorsal view. 2, Ventral view. 3, First leg. 4, Second leg. 5, Third leg.

scutum punctate, oval, wider than long with posterior notch between posterior pair of sensillae, $94\ \mu$ long by $110\ \mu$ wide. Scutum with 2 pairs of scutalae: Anterior pair (AL) with bractate coarse daggerlike ciliation, $67\ \mu$ long, arising anteriorly to anterior sensillae, close to shield edge. Posterior scutalae (PL) similar to AL, also with bractate ciliations, $63\ \mu$ long, arising $17\ \mu$ from margin of scutal edge, anteriorly of posterior sensillae in middle of scutum. Anterior sensillae of scutum slender, tapering ciliated, $54\ \mu$ long; posterior sensillae similar to anterior sensillae in length and structure, $63\ \mu$ long, arising at posterior edge of scutum.

Eyes with 2 distinct lenses on each side, well separated, with idiosomal striations running between them; situated posterolateral to scutum. Anterior lens $15\ \mu$ wide, $20\ \mu$ long, posterior lens $13\ \mu$ wide, $11\ \mu$ long; lens separated by $11\ \mu$.

Dorsal idiosomalae arising in longitudinal rows with bractate ciliations, $37\text{--}55\ \mu$ long with a total number of 38. Dorsal body setae similar to scutalae on scutum in structure and size.

Ventral idiosomalae consist of 21 setae including a pair located at base of gnathosoma, a single pair between posterior margin of coxae I and another pair between coxae II and III. Behind coxae III are 15 setae, eight on right of small anal opening and seven on left of anus. All ventral setae resembling dorsal idiosomalae and of about same length.

Legs long, slender, typical for genus and subfamily. Coxal formula, 1, 1, 1, these similar in structure to ventral and dorsal idiosomalae. Tarsus I and II each with a single dorsal solenoidala; tarsal trichobothrium absent; tarsal claws 2; anterior claw a straight rod with a terminal ventrally directed hook, with a ventral brush of branching ciliations; middle empodium slender, sides ridged with ciliations. Posterior claw rodlike with ventral branching ciliations.

Gnathosoma punctate, with the movable chelicerae stout. Palpal tibial claw strong, with a dorsal accessory claw. Palpal tarsus with 1 solenoidala.

Holotype.—A single larval specimen collected on the Rob and Bessie Welder Wildlife Refuge, 10 miles north of Sinton, Texas, San Patricio County, February 2, 1978, by B. McDaniel and Eric G. Bolen. Slide mounted holotype will be deposited in the U.S. National Museum of Natural History, Washington, D.C. (USNM).

Remarks.—The only adults of the family Erythraeidae collected on the same date and site of *B. shirleyanneae* were members of the genus *Leptus* of the subfamily Leptinae. The possibility of *Bochartia* being a synonym of the genus *Erythraeus* Latreille (s.s.) is very real according to Southcott (1961); however, no attempt has been made to solve this situation as the collection of a single larval specimen without adults and without rearing data makes proof impossible at this time.

Habitat.—The holotype was collected within the transitional zone between the South Texas Plains and the Gulf Prairies and Marshes regionally known as the Coastal Bend (Thomas, 1975). The site supported a prairie community of bunchgrasses and annual forbs on deep Nueces and Falfurrias fine sands. Switchgrass (*Panicum virgatum*), seacoast bluestem (*Schizachyrium scoparium*), Pan American balsamscale (*Elyonurus tripsacoides*), big bluestem (*Andropogon gerardi*) and other tall and mid-grasses mixed with doveweed (*Croton* spp.), skunk daisy (*Ximenesia encelioides*), and wild buckwheat (*Eriogonum multiflorum*) characterize the vegetation. Overall, the vegetational composition approximates 75% grasses and 19% forbs with

the balance consisting of woody or succulent species. The community resembles the tallgrass prairie of the Nebraska Sandhills although it contains a greater percentage of tropical or subtropical vegetation (Drawe et al., 1978).

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